

## REMARKS

### A. Regarding the Elected Species

It is stated in Paragraph 3 of the Office Communication that "...3) the agents are two threonine residues each bound to a linker through a carboxyl group on each of the threonine molecules;..." (emphasis added). Applicant points out, however, that the agent elected for examination of the subject application is "two identical nucleic acid agent molecules, each bound to a linker through a 5-position of a uracil base of a uridine residue present on each agent molecule" (see "Response to Restriction Requirement and Amendment" mailed August 13, 2003; paragraph bridging pages 1-2; emphasis). As such, the present Response is made with respect to the elected "nucleic acid agent molecules".

### B. Regarding the Communication

It is stated in Paragraph 3a) of the Communication that Applicant's previous response was incomplete because a chemical structure (picture) was not provided of a core structure from which the library of morphatides is created. A drawing is attached hereto illustrating the components of a morphatide core structure (and "target") comprising the elected species. It is noted that the linker is attached to the scaffold via a 5-position of a uracil base of a uridine residue of the scaffold and, similarly, that the nucleic acid agent is attached to the linker via a 5-position of a uracil base of a uridine residue of the nucleic acid agent.

With respect to the attached drawing, Applicant points out that SEQ ID NO:1 (18 nucleotides), the "randomized sequence" (36 nucleotides), and SEQ ID NO:2 (18 nucleotides) comprise the "scaffold" portion of a morphatide. SEQ ID NOS:1 and 2 are "fixed" regions that, for example, can be used as targets for PCR primer pairs such that the scaffolds can be amplified (see, e.g., page 53, lines 5-19).

Further, it should be noted that the notation "A,C,G - present in equal amounts" in the attached drawing indicates that these nucleotides are present in "equal amounts" in the reaction

in which the randomized sequence is generated (similarly, dUTP is present at 5% of the A,C,G concentrations in the reaction). As such, there can, but need not, be equal numbers of A and/or C and/or G in the randomized sequence of any one morphatide of a library. It should also be noted that, while the illustrated morphatide core structure is shown with two "U" residues (5% of 36 nucleotides = 1.8), any one morphatide in the library theoretically can contain 0 to 36 "U" residues in the randomized sequence, though molecules that do not contain any "U" residues would not be "scaffolds" as they would lack the linker and, therefore, a linked agent.

It is also stated in Paragraph 3b) of the Communication that the elected interaction is unclear in stating that the interaction is binding of the morphatide to the agent. In fact, the elected interaction should have been that the morphatide binds to the target. In this respect, Applicant points out that the interaction with the target is, at least in part, via the "agent" (see, e.g., page 32, first full paragraph). Further, Applicant elects "hydrogen bonds" as the type of interaction (*Id.*).

In view of the above remarks, it is submitted that the claims are in condition for allowance and a notice to that effect is respectfully requested. The Examiner is invited to contact Applicant's undersigned representative if there are any questions relating to this application.

In re Application of:

Jay M. Short

Application No.: 09/825,852

Filed: April 3, 2001

Page 4 of 4

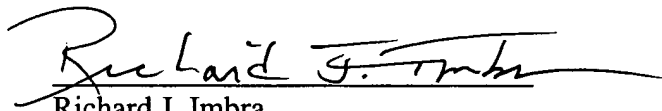
PATENT

Attorney Docket No. INVIT1250-4

Enclosed is Check No. 562178 in the amount of \$110.00 in payment of the one (1) month extension of time fee. The Commissioner is hereby authorized to charge any other fees that may be associated with this communication, or credit any overpayment, to Deposit Account No. 50-1355.

Respectfully submitted,

Date: July 2, 2004



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**Enclosure: Drawing**